

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION



MISSOURI STATE OPERATING PERMIT

In compliance with the Missouri Clean Water Law, (Chapter 644 R.S. Mo. as amended, hereinafter, the Law), and the Federal Water Pollution Control Act (Public Law 92-500, 92nd Congress) as amended,

Permit No. MO-0123927

Owner: Midland Oil Company
Address: 1601 Christy Drive, Jefferson City, MO 65101

Continuing Authority: MFA Oil Company
Address: One Ray Young Drive, P.O. Box 519, Columbia, MO 65205

Facility Name: Break Time #3112
Address: 6050 Highway AB East, Columbia, MO 65205

Legal Description: NW ¼, NW ¼, NW ¼, Sec 14, T47N, R12W, Boone County
Latitude/Longitude: +3851364 / -09214548

Receiving Stream: Unnamed tributary to Turkey Creek (U)
First Classified Stream and ID: Turkey Creek (C) (00751) (Outstanding State Resource Water)
USGS Basin & Sub-watershed No.: (10300102 – 130002)

is authorized to discharge from the facility described herein, in accordance with the effluent limitations and monitoring requirements as set forth herein:

FACILITY DESCRIPTION

Outfall #001 – Convenience Store – SIC # 4952
Septic tank/Recirculating sand filter/sludge disposal by contract hauler
Design population equivalent is 18.
Design flow is 1,800 gallons per day.
Actual flow is 767 gallons per day.
Design sludge production is 0.13 dry tons/year.

This permit authorizes only wastewater discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas. This permit may be appealed in accordance with Section 644.051.6 of the Law.

September 22, 2006
Effective Date

A handwritten signature in dark ink, appearing to read "Doyle Childers".

Doyle Childers, Director, Department of Natural Resources
Executive Secretary, Clean Water Commission

September 21, 2011
Expiration Date
MO 780-0041 (10-93)

G. Irene Crawford, Director, Northeast Regional Office

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS					PAGE NUMBER 2 of 4	
					PERMIT NUMBER MO-0123927	
The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective on the date of issuance and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #001</u>						
Flow	MGD	*		*	once/ month	24 hr estimate
Temperature	°C	*		*	once/ month	grab
Biochemical Oxygen Demand ₅	mg/L		30	20	once/ month	Composite**
Total Suspended Solids	mg/L		30	20	once/ month	Composite**
PH – Units	SU	***		***	once/ month	grab
Ammonia as N	mg/L	*		*	once/ month	grab
The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The interim effluent limitations shall become effective upon issuance and remain in effect until September 22, 2009. Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	INTERIM EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #001</u>						
Fecal Coliform (note 1)	#/100mls	*		*	once/ month	grab
The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective on September 23, 2009 and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #001</u>						
Fecal Coliform (note 1)	#/100mls	1000		400	once/ month	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>MONTHLY</u> ; THE FIRST REPORT IS DUE <u>November 28, 2006</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
B. STANDARD CONDITIONS						
IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED <u>Parts I & III</u> STANDARD CONDITIONS DATED <u>October 1, 1980 and August 15, 1994</u> , AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.						

MO 780-0010 (8/91)

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

- * Monitoring requirement only.
- ** A composite sample made up from a minimum of four grab samples collected within a 24-hour period with a minimum of two hours between each grab sample.
- *** pH is measured in pH units and is not to be averaged. The pH is limited to the range of 6.0-9.0 pH units.

Note 1 - Final limitations and monitoring requirements for Fecal Coliform and Total Residual Chlorine are applicable only during the recreational season from April 1 through October 31.

C. SPECIAL CONDITIONS

1. This permit may be reopened and modified, or alternatively revoked and reissued, to:
 - (a) Comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a) (2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:
 - (1) contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
 - (2) controls any pollutant not limited in the permit.
 - (b) Incorporate new or modified effluent limitations or other conditions, if the result of a waste load allocation study, toxicity test or other information indicates changes are necessary to assure compliance with Missouri's Water Quality Standards.
 - (c) Incorporate new or modified effluent limitations or other conditions if, as the result of a watershed analysis, a Total Maximum Daily Load (TMDL) limitation is developed for the receiving waters which are currently included in Missouri's list of waters of the state not fully achieving the state's water quality standards, also called the 303(d) list.

The permit as modified or reissued under this paragraph shall also contain any other requirements of the Clean Water Act then applicable.
2. All outfalls must be clearly marked in the field.
3. Permittee will cease discharge by connection to areawide wastewater treatment system within 90 days of notice of its availability.
4. Changes in Discharges of Toxic Substances

The permittee shall notify the Director as soon as it knows or has reason to believe:

- (a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
 - (1) One hundred micrograms per liter (100 µg/L);
 - (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,5 dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
 - (3) Five (5) times the maximum concentration value reported for the pollutant in the permit application;
 - (4) The level established in Part A of the permit by the Director.
 - (b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant, which was not reported in the permit application.
5. Report as no-discharge when a discharge does not occur during the report period.
 6. Water Quality Standards
 - (a) Discharges to waters of the state shall not cause a violation of water quality standards rule under 10 CSR 20-7.031, including both specific and general criteria.
 - (b) General Criteria. The following general water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:
 - (1) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;
 - (2) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
 - (3) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;
 - (4) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;
 - (5) There shall be no significant human health hazard from incidental contact with the water;
 - (6) There shall be no acute toxicity to livestock or wildlife watering;
 - (7) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
 - (8) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.

C. SPECIAL CONDITIONS (continued)

7. Sludge and Biosolids Use For Domestic Wastewater Treatment Facilities

- (a) Permittee shall comply with the pollutant limitations, monitoring, reporting, and other requirements in accordance with the attached permit Standard Conditions.
- (b) If sludge is not removed by a contract hauler, Permittee is authorized to land apply biosolids that are removed from the domestic wastewater treatment facility during clean-out and maintenance activities. Permit Standard Conditions, Part III shall apply to the land application of biosolids. Permittee shall notify the department at least 180 days prior to the planned removal of biosolids from the facility. The department may require submittal of a biosolids management plan for department review and approval as determined appropriate on a case-by-case basis.

D. SCHEDULE OF COMPLIANCE

1. The final daily maximum and monthly average Fecal Coliform limits of 400/100ml and 1000/100ml, respectively, shall become effective three (3) years after the issue date of the permit. The Effluent Regulation, 10 CSR 20-7.015(10) allows the permittee up to three (3) years from the issuance date of this permit to comply with new or revised National Pollutant Discharge Elimination System (NPDES) or Missouri operating permit limitations based on criteria in the Clean Water Commission Regulations. It states that such compliance "shall be achieved with all deliberate speed and no later than three (3) years from the date of issuance of the permit." Therefore disinfection facilities must be installed if required to meet the limits of this permit.
2. If chlorination is the chosen method of disinfection, a Total Residual Chlorine limit will be added to the permit.
3. Midland Oil Company is to submit engineering plans, engineering specifications, and a construction permit application by March 22, 2008, for changes to the Break Time #3112 Wastewater Treatment Facility so the discharge from the facility will meet the final effluent limits for Fecal Coliform and Total Residual Chlorine.
4. Midland Oil Company for Break Time #3112 Wastewater Treatment Facility will meet final effluent limits by September 22, 2009.

Date of Fact Sheet: May 26, 2006
Date of Public Notice: June 2, 2006

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT
FACT SHEET

This Fact Sheet explains the applicable regulations, rationale for development of this permit and the public participation process.

NPDES PERMIT NUMBER:	MO-0123927	
FACILITY NAME:	Break Time #3112	
OWNER NAME:	Midland Oil Company	
Continuing Authority Name:	MFA Oil Company	
LOCATION:	6050 Highway AB East, Columbia, MO 65205	
	Sec. 14 T47N R12W	County: Boone
RECEIVING STREAM:	Tributary to Turkey Creek (U)	
FACILITY CONTACT PERSON:	Daniel Creek	TELEPHONE: (573) 219-5785
		CELL PHONE: (573) 823-5473

FACILITY DESCRIPTION

0.0018 MGD Septic tank/Recirculating sand filter/sludge disposal by contract hauler

This facility provides secondary treatment of the wastewater discharge with a primary septic tank in parallel with a grease trap, a secondary septic tank with an effluent filter and a recirculating sand filter. The sludge is removed by a contract hauler.

The Federal Water Pollution Control Act ("Clean Water Act" Section 402 Public Law 92-500 as amended) established the National Pollutant Discharge Elimination System (NPDES) permit program. This program regulates the discharge of pollutants from point sources into the waters of the United States, and the release of storm water from certain point sources. All such discharges are unlawful without a permit (Section 301 of the "Clean Water Act"). After a permit is obtained, a discharge not in compliance with all permit terms and conditions is unlawful. Permits in Missouri are issued by the Director of the Department of Natural Resources under an approved program, operating in accordance with federal and state laws (Federal "Clean Water Act" and "Missouri Clean Water Law" Section 644 as amended).

10 CSR 20-7.031 Missouri Water Quality Standards, Missouri Department of Natural Resources (the Department) "defines the Clean Water Commission water quality objectives in terms of water uses to be maintained and the criteria to protect those uses." The classified receiving stream's beneficial water uses to be maintained are livestock and wildlife watering, protection of aquatic life, and whole body contact recreation (level A).

To protect these beneficial uses and the water quality of the receiving stream, effluent limitations are being established under federal and state laws.

EFFLUENT LIMIT DERIVATION & RATIONALE

A Water Quality Review Sheet was developed.

Permit limits for BOD5, TSS, and pH have been retained from the previous permit, as this level of protection is necessary as the facility discharges to Turkey Creek, an Outstanding State Resource Water. In addition, Turkey Creek is on the A list for Whole Body Contact Recreation. The facility is less than two (2) miles from Turkey Creek, therefore Fecal Coliform monitoring and limits were included in the effluent requirements for this permit. A three-year schedule of compliance is included in the permit to allow for the facility to comply with the fecal coliform requirements.

Monitoring for ammonia and temperature has been added due to the adoption of the U. S. Environmental Protection Agency's "1999 Update of Ambient Water Quality Criteria for Ammonia", and to determine whether "reasonable potential" to exceed water quality standards exists after the discharge begins.

The permit contains a "reopener" clause as a protection in case the data generated by this permit or other monitoring data indicate that state water quality standards are being exceeded due at least in part to this discharge.

This permit will be issued for a period of five years.



Missouri Department of Natural Resources
Water Protection Program
Water Pollution Control Branch
NPDES Permits And Engineering Section

Water Quality Review Sheet

Determination of Effluent Limits

FACILITY INFORMATION

FACILITY NAME: BREAK TIME #3112 NPDES #: MO-0123927

FACILITY TYPE/DESCRIPTION: Secondary/ Primary septic tank w/ parallel grease trap/ secondary septic tank/ dosing tank w/recirculating sand filter. Sludge is removed by contract hauler.

ECOREGION: Ozark Highlands 8- DIGIT HUC: 10300102 COUNTY: Boone
Central Irregular Plains Interior River Valleys and Hills Ozark Highlands
Mississippi Alluvial & Loess Plains Western Corn Belt Plains

LEGAL DESCRIPTION: NW¼, NW¼, NW¼, SEC 14, T47N, R12W LATITUDE/LONGITUDE: +3851364/-09214548

WATER QUALITY HISTORY: Four excursions for BOD5 and five excursions for TSS. Two notices of violation, one for multiple violations.

OUTFALL CHARACTERISTICS

OUTFALL	DESIGN FLOW (CFS)	TREATMENT TYPE	RECEIVING WATERBODY	OTHER
001	0.0028	Secondary	Tributary to Turkey Creek	

RECEIVING WATERBODY INFORMATION

WATERBODY	CLASS	7Q10(CFS)	*DESIGNATED USES	OTHER CHARACTERISTICS
Tributary to Turkey Creek	U	0	General Criteria	
Turkey Creek	C	0.1	LWW, AQL, WBC	WBID - 0751

*Cool Water Fishery (CLF), Cold Water Fishery (CDF), Irrigation (IRR), Industrial (IND), Boating & Canoeing (BTG), Drinking Water Supply (DWS), Whole Body Contact Recreation (WBC), Protection of Warm water Aquatic Life and Human Health (AQL), Livestock & Wildlife Watering (LWW)

COMMENTS: The discharge is to a tributary to Turkey Creek, about 0.5 miles above Turkey Creek and 1.6 miles above Three Creeks Conservation Area. This part of Turkey Creek has been designated an "Outstanding State Resource Water".

MIXING CONSIDERATIONS

Mixing Zone (MZ): Not allowed, discharge to unclassified stream. Acute criteria apply per 10 CSR 20-7.031(3)(I)1. and chronic criteria apply at the classified stream

Zone of Initial Dilution (ZID): Not allowed due to unclassified receiving stream. Acute criteria must be met end-of-pipe.

PERMIT LIMITS AND INFORMATION

TMDL WATERSHED: (Y OR N) ☐ N W.L.A. STUDY CONDUCTED: (Y OR N) ☐ N DISINFECTION REQUIRED: (Y OR N) ☒ Y USE ATTAINABILITY ANALYSIS: (Y OR N) ☐ N

OUTFALL# 001

WET TEST (Y OR N): ☐ N FREQUENCY: N/A A.E.C. N/A LIMIT: N/A

PARAMETER	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MONITORING FREQUENCY
FLOW (MGD)*	MONITOR			ONCE/MONTH
TEMPERATURE (°C)	MONITOR			ONCE/MONTH
BOD5 (MG/L)		30	20	ONCE/MONTH
TSS (MG/L)		30	20	ONCE/MONTH
PH (S.U.)	6-9		6-9	ONCE/MONTH
AMMONIA (MG/L)	MONITOR			ONCE/MONTH
FECAL COLIFORM (# COLONIES/ 100ML)	1000		400	ONCE/MONTH
TOTAL RESIDUAL CHLORINE (MG/L)	0.019		0.010	ONCE/MONTH

Please report the date, time, and location for each parameter sampled along with the average daily flow (actual flow measured or estimated, not design flow). All the parameters should be sampled on the same day and within no more than a 2-hour period. If dissolved oxygen (DO) is to be sampled, sampling should take place within 1 hour of sunrise. If discharge is contingent to storm events, rainfall should be measured every time there is a discharge.

RECEIVING WATER MONITORING REQUIREMENTS

There is no instream monitoring recommended at this time.

DERIVATION AND DISCUSSION OF LIMITS

Standard technology based limits for BOD5, TSS and fecal coliform from 10 CSR 20-7.015 are assumed to protect the receiving stream based on the small size of the proposed discharge. However other nearby discharges may negate that assumption. Monitoring for temperature and ammonia are included to determine whether "reasonable potential" to exceed water quality standards exists after the discharge begins. The Permit should contain a "re-opener clause" to address potential water quality issues should this or other monitoring indicate water quality standards are being exceeded due in part to this discharge. Should chlorine be used as a disinfectant, at this facility, the effluent shall be de-chlorinated to meet the referenced limits established to protect aquatic life.

Reviewer: Ed Pate

Date: March 7, 2006

Unit Chief: Refaat Mefrakis

Monitoring and effluent limits contained within this document have been developed in accordance with EPA guidelines using the best available data and are believed to be consistent with Missouri's Water Quality Standards and Effluent Regulations. If additional water quality data or anecdotal information is available that may affect the recommended monitoring and effluent limits, please forward these data and information to the author.